

1 1. (Amended) An alloy which comprises:

C1 2 Si : 6.5 - 7.5 wt%

3 Fe: up to 0.20 wt%

4 Cu : up to 0.05 wt%

5 Mn : up to 0.05 wt%

6 Mg : 0.40 to 0.45 wt%

7 Zn : up to 0.05 wt%

8 Ti : up to 0.20 wt%

9 and the balance Al and other components, wherein said other

10 components comprise a total of not more than 0.15 wt% of said alloy and any  
11 single component of said other components does not exceed 0.05 wt% of said  
12 alloy, the alloy having a microstructure which includes a primary aluminum-  
13 containing matrix and one or more iron-containing phases dispersed in the  
14 matrix, wherein the sole or predominant iron-containing phase is  $\beta$  phase that  
15 has formed as a transformation product of phase and wherein the matrix has  
16 a dendrite arm spacing of between 10 and 45  $\mu\text{m}$ .

C2 1 5. (Amended) A method for manufacturing an alloy article comprising  
2 the steps of:

3 (a) providing a melt having a composition of:

4 Si : 6.5 - 7.5 wt%

5 Fe: up to 0.20 wt%

6 Cu : up to 0.05 wt%

7 Mn: up to 0.05 wt%

8 Mg : 0.40 to 0.45 wt%

9 Zn: up to 0.05 wt%

10 Ti : up to 0.20 wt%

11 and the balance Al and other components, said other components  
12 comprising a total of not more than 0.15 wt% of said alloy and any single  
13 component of said other components not exceeding 0.05 wt% of said alloy,

14 (b) casting said melt and solidifying a casting at a cooling rate that  
15 produces a microstructure of an aluminum-containing matrix and  $\pi$  and  $\beta$  iron-  
16 containing phases dispersed in the matrix, wherein the cooling rate on  
17 solidification is sufficient to produce a dendrite arm spacing in the matrix of  
18 between 10 and 45  $\mu\text{m}$ ;

19 (c) solution heat treating the casting to at least partially transform  $\pi$   
20 phase to  $\beta$  phase; and

21 (d ) quenching the casting to form the alloy article.

C2

